	Division of Environmental Health and Communicable Disease Prevention	
	Section: 4.0 Diseases and Conditions	Revised 7/03
	Subsection: Hepatitis C	Page 2 of 14

Hepatitis C

Overview^(1,2)

For a more complete description of hepatitis C, refer to the following text:

- Control of Communicable Diseases Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

Comment: Hepatitis C accounted for the majority of infections previously referred to as hepatitis non-A, non-B.

Case Definition⁽³⁾

Hepatitis C (Acute)

For surveillance purposes, a confirmed case of acute hepatitis C is one that meets both clinical and laboratory criteria:

Clinical criteria

An acute illness with

- discrete onset of symptoms consistent with acute viral hepatitis **and**
- jaundice **or** elevated serum aminotransferase levels (liver enzymes)

Laboratory criteria for diagnosis

- Serum aminotransferase levels > 7 times the upper limit of normal, **and**
- Antibody to hepatitis C virus (anti-HCV) positive by EIA, verified by a supplemental test (e.g., RIBA **or** PCR) or an EIA with a S/CO ≥ 3.8 , **and**
- IgM anti-HAV negative, **and**
- IgM anti-HBc negative (if done) or HBsAg negative.

EIA – Enzyme Immunoassay


RIBA – Recombinant Immunoblot Assay, used to confirm a positive EIA test.

PCR – Polymerase Chain Reaction used to detect the presence of the HCV virus and determine the viral load of the individual.

S/CO – Signal Cut-Off ratio, measures the strength of the EIA reaction. S/CO ratios greater than or equal to 3.8 have a 95% chance of being RIBA positive.

Case classification

Confirmed: a case that meets the clinical case definition **and** the laboratory criteria.

	Division of Environmental Health and Communicable Disease Prevention	
	Section: 4.0 Diseases and Conditions	Revised 7/03
	Subsection: Hepatitis C	Page 3 of 14

Comment

Patient liver enzymes (ALT) must be greater than seven times the upper limit of normal. According to CDC, 97% of patients with acute hepatitis C will have ALT's greater than this level. ⁽⁴⁾

Hepatitis C (Chronic Infection)

Case Definitions for Confirmed, Probable, and Suspect Chronic Cases: ⁽⁵⁾

Clinical criteria

None

Cases in these categories may or may not have an acute onset of illness or symptoms and may or may not have elevated liver enzyme test results.

The presence or absence of other viral markers of hepatitis are not relevant to these classifications.

Chronic HCV Case Classification

Confirmed:

- Positive antibody to hepatitis C virus (anti-HCV) by EIA verified with a S/CO \geq 3.8, or by a supplemental test (e.g., RIBA, PCR), **or**
- Positive RIBA or PCR test in the absence of other tests.

Probable:

- Elevated ALT values and positive anti-HCV by EIA test unverified by a more specific essay.

Suspect:


- Positive anti-HCV by EIA test and does not meet the “confirmed” or “probable” chronic case classifications for HCV infection.

Information Needed for Investigation

Verify the diagnosis. What laboratory tests were conducted? What were the results? What were the case's clinical symptoms? Is this an acute case or is this a chronic hepatitis C infection?

Establish the extent of illness. Determine if household or other close contacts are, or have been ill, by contacting the health care provider, patient or family member.

Contact the Regional Communicable Disease Coordinator if an outbreak is suspected.

	Division of Environmental Health and Communicable Disease Prevention	
	Section: 4.0 Diseases and Conditions	Revised 7/03
	Subsection: Hepatitis C	Page 4 of 14

Case/Contact Follow-Up And Control Measures

Determine the source of infection:

- Determine if the case has any of the following risk factors for this disease: had received clotting factor concentrates before 1987; had received transfusions of blood or blood components before 1992; were notified that they had received blood from a donor who later tested positive for HCV infection, had received an organ transplant before 1992. Or, who recently or in the past, had needle-sticks, sharps or mucosal exposure to HCV-positive blood, engaged in injecting drug use or any activity that may involve the sharing or re-use of needles such as tattooing/body piercing, had multiple sex partners, a sex partner with hepatitis C, or other close contact with an individual with hepatitis C. ⁽⁶⁾
- Determine if the case has received counseling regarding this virus and the methods to prevent transmission.

Control Measures

See the Hepatitis C section of the Control of Communicable Diseases Manual (CCDM), "Control of patient, contacts and the immediate environment".

See the Hepatitis C section of the Red Book.

Laboratory Procedures


Specimens:

Testing for hepatitis C is not currently performed at the Missouri State Public Health Laboratory. Contact the testing laboratory for specific collection and transport requirements.

Reporting Requirements

Hepatitis C is a Category II disease and shall be reported to the local health authority or to the Missouri Department of Health and Senior Services (DHSS) within 3 days of first knowledge or suspicion.

1. For confirmed acute hepatitis C cases, complete a "DHSS Disease Case Report" form (CD-1) **and** CDC's "Viral Hepatitis Case Report" form.
2. For confirmed, probable and suspect chronic hepatitis C cases, submit a completed CD-1 and/or a legible lab report with patient's address.
3. For confirmed chronic cases **≤ 30 years old*** **or** any case that merits additional investigation complete a CD-1 **and** CDC's "Viral Hepatitis Case Report form.
4. Send completed forms to the appropriate Regional Health Office.
5. Entry of the completed CD-1 into the MOHSIS database negates the need for the paper CD-1 to be forwarded to the Regional Health Office.

	Division of Environmental Health and Communicable Disease Prevention	
	Section: 4.0 Diseases and Conditions	Revised 7/03
	Subsection: Hepatitis C	Page 5 of 14

6. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
7. Within 90 days from the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator

*Investigation of new cases 30 years old and younger is designed to capture risk, behavior, and medical evaluation information, and provide opportunities for disease and prevention education. Information collected from individuals recently infected will help further enhance prevention education efforts through identifying risky behaviors.

References

1. Chin, James, ed. "Hepatitis C." *Control of Communicable Diseases Manual (CCDM)*, 17th ed. Washington, D.C.: American Public Health Association, 2000: 251- 253
2. American Academy of Pediatrics. "Hepatitis C." In: Pickerton, LK. ed. *2000 Red Book: Report of the Committee on Infectious Diseases*. 25th ed. Elk Grove Village, IL. 2000: 302-306.
3. Centers for Disease Control and Prevention. *Case Definitions for Infectious Diseases Web Site*, http://www.cdc.gov/EPO/DPHSI/casedef/hepatitis_viral_acute_current.htm
4. Hepatitis Control Report, *Big Changes are Coming for Hepatitis C Surveillance*, Summer 2001, Volume 6, Number 2.
5. Missouri Department of Health and Senior Services- Section of Communicable Disease Control and Veterinary Public Health surveillance case definition.
6. Centers for Disease Control and Prevention. *Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease*. MMWR 1998;47 (No. RR-19): 1-39.

Other Sources of Information

Mandell, Gerald L., John E. Bennett, & Raphael Dolin, Eds. *Principles and Practice of Infectious Diseases*, 5th. Ed. New York: Churchill Livingstone, 2000: 1279-1295, 1736-1753.

Evans, Alfred S. and Richard A. Kaslow, Eds. *Viral Infections of Humans Epidemiology and Control*; 4th ed. Eds. New York: Plenum, 1997: 387-394.

Centers for Disease Control and Prevention. *Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease*. MMWR 1998;47 (No. RR-19): 1-39.